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THE PROPOSAL FOR A CENTRAL BANK IN THE UNITED STATES: A CRITICAL VIEW.

SUMMARY.

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During recent years, and especially since the crisis of 1907, the proposal to establish a central bank in the United States has received an increasing measure of favorable consideration, and is now being urged by an influential, if not numerous body of bankers and others interested in the improvement of our present system. Dissatisfaction

with the working of our credit machinery has become general, and is certainly not without foundation. It is an exceptional year that does not witness troublesome friction in its operation, while on occasion of severe financial strain it has almost invariably broken down, with disastrous consequences to the entire business community. To establish a central bank as a remedy for these ills would indeed involve a radical and even revolutionary departure from our banking traditions and practise. But therein may perhaps be found no small part of the attractiveness and promise of the proposal. Legislative safeguards are already far more numerous and detailed than in any other country, and our banks hold more money in proportion to credit liabilities than is customary elsewhere, with the possible exception of France. In spite of these apparent sources of strength, fluctuations in the rates for loans in our financial centers are far more violent than in London and other European capitals. This, however, is a small matter compared with the successive suspensions of cash payments to which our banks have resorted during the three great crises which have taken place since the organization of the national banking system.

Observation of the superior results achieved elsewhere certainly affords a most humiliating contrast, an apparent explanation of which is the presence of a central bank in all the principal commercial countries, with the exception of the United States. In this connection it is noteworthy that the main causes to which our troubles are commonly attributed are found in our peculiar methods of dealing with matters which are elsewhere made the concern of central banks. The withdrawal of money from general use under the operation of the independent Treasury system is unknown where central banks are employed as government fiscal agents. A more or less elastic note

issue is secured in all countries having central banks, with the exception of England. Finally, these banks are the main-stay of credit in times of acute financial strain. Conservatively managed, as they commonly have been, they have been able to lend freely in emergencies, and have also taken the lead in securing united action among the other banks. Certainly, foreign experience seems to warrant the belief that a central bank might prove an adequate remedy for our financial ills.

To these considerations in favor of a central bank, additional force is given when recent foreign literature and legislation on banking are considered. In his classical work upon the proper policy for a central bank, Bagehot, writing nearly forty years ago, was not convinced that the monarchical principle in banking was by any means the best. He accepted it for England as a product of long historical growth familiar to every one, and therefore better than a more perfect system, which would require revolutionary changes. But since his day the central banks have become stronger and more conspicuous; new ones have been established, notably in Japan and Switzerland; and without exception they have grown in power and prestige. This development, it is true, has not been due to banking causes alone. Political and also military considerations have been potent influences. But there can be no question that in European business circles, as well as among economists, the central bank has been generally accepted as a valuable, if not indispensable, feature in a highly developed and satisfactory banking system.

With so strong a presumption in its favor the proposal to establish a central bank in the United States deserves thoughtful attention and careful analysis. Weighty objections to the plan must be based upon grounds which make it reasonably certain that the central bank could not

achieve those results which have been secured in other countries. Certain difficulties, however, which are not fundamental may properly be given at least passing attention. They are of a nature of which account must be taken if general public approval is to be secured for the measure, and which would render the task of a central bank exceptionally burdensome.

With the exception of Russia, there is no country of anything like the area of the United States in which we may study the operations of a central bank, and comparisons drawn from that country would be valueless, and even misleading, because of the relatively slight development of its credit machinery and on account of the autocratic power of the Russian government. Whether difficulties of a serious nature would manifest themselves on account of the size of the country must therefore be largely a matter of personal opinion, as to which wide differences may be expected. It may, however, be stated with some confidence that it would not be possible for a central bank to place a branch in every locality, taking, for example, the county as a unit. Thousands of branches would be required to provide facilities as generally accessible as those afforded through the five hundred branches of the Bank of France or of the Bank of Germany. Administrative difficulties would be insurmountable, to say nothing of the almost equally serious obstacle of a political nature arising from the bitter opposition of local bankers.

But numerous branches are not essential for the successful operation of a central bank. The Bank of England, which has but eleven branches, is in this matter a more suitable example. Branches in fifty or perhaps one hundred cities might be expected to afford the means of extending the operations of the central bank to all parts of the country. The control of these branches would, in-

deed, be peculiarly difficult on account of the distances which would separate many of them from the head office. Here the example of Canada might be thought to supply a precedent. But the situation is not parallel, because of the vastly greater responsibilities which would rest upon the managers of the branches of a central bank on account of the peculiar nature of its business. Finally, an interesting minor consequence of the size of the country may be noted. It would not be possible to despatch money or notes from the head office to the branches, or to other banks throughout the country, between the close and the beginning of business hours on successive days. It would be necessary to keep a supply of funds at the various branches throughout the country. Moreover, the requirements of the other banks for making provision for abnormal withdrawals of money by depositors would also be larger than in other countries. The physical concentration of reserves could not, therefore, be carried with safety so far as in smaller countries, and a somewhat larger reserve would be required in proportion to the total demand liabilities of the banks of the country.

Closely connected with the size of the country is the variety of its economic activities and the wide differences in stages of development reached in its different sections, especially in respect to the accumulation of capital. It would be extremely difficult for the management of a central bank to analyze correctly the business situation and to forecast the immediate future,—matters which are essential to a determination of the proper policy to be adopted at any particular moment. In this respect, however, the situation would perhaps not be more complex than that which confronts the management of the Bank of England on account of the international position of the London money market. A more serious difficulty

seems to be found in the distrust of, and even hostility towards, the Eastern financial centers, which still persists in those sections of the country which are primarily agricultural. This attitude is an inevitable consequence of the position in which the people of a newly settled region find themselves, when, in order to develop its resources rapidly, they have borrowed largely from distant capitalists. But the accumulation of capital, as well as the liquidation of debt, has been a notable feature in the recent economic history of the Western States, and already the traditional feeling towards the Eastern creditor has faded to a shadow of its former self. On the other hand, a less sectionalized but more diffused feeling against the methods of wealthy financiers has been created by the investigations and agitation of the last few years. The present juncture is an unfavorable moment for the establishment of a central bank, because men having the experience required for its management can hardly be found outside the circles of those who have been the subject of wide-spread doubt and discredit. It is to be feared that, in order to allay alarm from the two sources above mentioned, the details of organization would be prescribed and the powers of the management restricted in ways which might seriously impair its usefulness.

Were objections to a central bank solely of the kind which have been examined up to this point, it might be said with truth that every radical change must present difficulties as real and as serious. No one of the objections or all of them together could afford ground for the opinion that a central bank might not, at least in the course of time, give to our banking system those elements of strength and efficiency which it is agreed upon all hands are now sadly lacking. In the preceding paragraphs, however, we have by no means reached the heart of the problem. It is essential that we examine

the particular powers and devices made use of by existing central banks in the exercise of their peculiar functions. Only after the effectiveness of these powers and devices in varying circumstances has been determined, will it be possible to form a reasonably accurate estimate of the results which may be expected from a central bank in the United States.

The special functions of central banks may be grouped under three heads: they serve as fiscal agents of government; they have large powers of control over the currency through the more or less complete monopoly of note issue; and, finally, since they hold a large part of the reserves of the other banks, they are directly responsible for the foundation of the entire structure of credit. This last is by far the most important function of central banks. Indeed, in a general but very true sense, central banks may be said to have but this single function, —to insure the maintenance and smooth working of the systems of credit, of which they are the most important, tho not necessarily the most considerable, members. It rests upon central banks because the other banks, which hold little or no cash reserves, rely upon their deposits at the central bank and upon the expectation of being able to borrow from it through rediscounts or direct loans.[1]

This centralization of bank reserves has been everywhere a characteristic feature in the evolution of central banks. Historically, it is probable that it came about in large measure as a result of the monopoly of note issue and of the government business handled by them. Such is quite certainly the case with the Bank of England, the earliest central bank in date and the model for all others of its kind. Through its government business other banks were

[1] The London banks do not borrow directly from the Bank of England. They withdraw money lent to bill brokers, who in turn are obliged to borrow from the Bank The difference is one of form rather than of substance

inevitably brought into daily contact with it, and the convenience of an account upon its books became readily apparent. Again, the right of note issue, in a period when banking methods were undeveloped, was an advantage which, along with its government business, gave the Bank of England a position of unquestioned superiority, both in size and in prestige. From keeping a balance to keeping their entire reserve in the central bank required no essential change in the every-day methods of business of the other banks. This stage had been reached in England before the close of the eighteenth century, and for generations English bankers have held in their own vaults only such amounts of money as are required for every-day purposes,—till-money, as the English are wont to designate it. This custom was still further strengthened in 1854, when the plan was adopted, in the settlement of clearing balances, of simple transfers upon the books of the central institution. In other countries, virtually the same situation has been reached. Altho the other banks may hold a slightly greater amount of cash, they carry balances, larger or smaller, with the central bank, and are quite as dependent upon it to meet extraordinary requirements.

A somewhat analogous situation is familiar in this country. It was being developed before the Civil War from motives of business convenience, step by step with the more intimate commercial relations which improved transportation made possible between different sections of the country. Our national banking law crystallized this development at a point of somewhat less concentration than was reached by European banks without legislative restrictions. With us any unusual demand for money sooner or later involves withdrawals from New York, not indeed from any single New York bank, but from some one of the ten or twelve banks in that city which hold

practically all the deposits of outside banks. The situation of these banks, and in a minor degree that of the banks in other reserve cities, is similar to that of a European central bank, and the responsibilities incurred are of the same nature. A most striking difference is that the European central banks recognize this responsibility and understand the policy which they should adopt, while our reserve holding banks do not. The responsibility is apparently so scattered that it is not sufficiently felt.[1] Here the establishment of a central bank may seem a hopeful means of improvement, since it is obviously more easy to secure effective action from a small number of closely associated directors of a single bank than from the directors of many banks, especially when they are not all in the same locality.

It may be seriously questioned whether it is either practicable or desirable that reserves should be concentrated in the United States to the extent customary in Europe. The deposit liabilities of the banks of the United States are more than twice as large as those in any other country. Moreover, on account of the size of the country and the number of its banks, an exceptionally large reserve is required for a given volume of deposits. With the complete concentration of reserves the amount of money and the extent of business of the central bank would become portentously large. It seems more practicable that the banks should continue to hold at least as great a portion of their reserves in their own vaults as is now customary. The burden upon the central bank would be somewhat diminished, but not to such an extent as to weaken the force of comparison with existing central

[1] The concentration of reserves in the United States is greater than is often supposed. Six New York banks (the City, Bank of Commerce, Park, Hanover, First, and Chase) hold three-fourths of the bankers' deposits secured by the New York banks, and there are scarcely fifty banks in all the reserve and central reserve cities with bankers' deposits of more than $5,000,000. See what is said below on this topic at p. 412.

banks. Our central bank would doubtless be relied upon to supply unusual requirements for money, the other banks regarding the reserve held by them as a sort of permanent foundation of credit, not as something to be used.

A much more difficult problem presents itself with regard to that proportion of the reserves of banks which is now deposited with banks in reserve and central reserve cities. At present the national banks in the three central reserve cities alone hold about $600,000,000 of net bankers' deposits, and the banks of the reserve cities hold about two-thirds as much more. Whether all, a part, or none of these deposits are to go to a central bank is a matter of the utmost importance. Doubtless, in any circumstances, a part of these deposits would be retained by their present holders. Considerations of business convenience and the probability that the central bank, following the custom of similar institutions in other countries, would not pay interest, would tend to the continuance, to a considerable extent, of existing arrangements. No great change seems to be expected by those who urge a central bank, tho this is, perhaps, owing to a failure to give the matter careful consideration. Its fundamental significance will appear at a later stage in this discussion.

In the exercise of their function in relation to the reserve, the possession of government balances and the monopoly of note issue are valuable instruments in making effective the means adopted by central banks. But neither of these advantages, it should be noted, is essential to the working of a central bank. Government balances are at times so small as to be of little service, and in the case of the Bank of England the right of note issue is of no practical importance whatever, since the Bank of England note is virtually nothing more than a gold certificate. Even in countries where the central bank is able

to extend its credit in the form of notes, it is still true that the means used in the furtherance of the reserve policy are, in substance, similar to those of the Bank of England. The right of note issue, as will be seen later, is simply a valuable resource in the furtherance of a policy which would be adopted in any case. This is a matter which cannot be too strongly emphasized, since the proposal to establish a central bank in the United States is being urged primarily in order to secure a mechanism for the issue of notes.

In analyzing the operations of a central bank, three situations may be distinguished with regard to which, tho the general purpose is the same, the policy adopted is strikingly different. These three situations are: first, periods of normal business activity; second, periods of moderate financial strain; third, periods of acute strain and panic. In the following pages the activities of central banks will be studied in each of these situations, comparison being made from time to time with what may be reasonably expected from a similar institution in the United States.

I.

Activities in Normal Times.

The activities of a central bank in normal times are of a comparatively simple and even routine nature, not very different from those of the other banks about it. In some countries on account of statutory requirements, and in all countries from motives of sound policy, its loans and other investments are confined to those which are deemed of high quality. The high quality of the assets is not, however, insisted upon with the intention of converting them into money in times of emergency. A central bank is then the refuge of last resort for the other banks, and

any attempt to call in loans or realize on securities at such times would be directly opposed to the working principles of the central reserve banking system. It invariably happens at such times that the loans of central banks are largely increased.[1] The good quality of the assets in general is important because it gives that prestige which is half the battle for a central bank. A reputation for conservative, sound judgment is absolutely essential to the maintenance of universal faith in the strength of the central institution. For this reason, and even more in order to be able to meet the responsibilities of its position, it is equally essential that a central bank should hold a very large reserve against its credit liabilities. There is, of course, no precise proportion of reserve which is everywhere adequate amid varying circumstances. The general character of the economic activities of the country and the size of its entire credit structure must be the determining considerations for each central bank. In all countries with such institutions there has been a distinct tendency to maintain a larger reserve than was thought necessary twenty years ago. This seems to be due to a more clear recognition of their responsibilities, and because these responsibilities have increased with the growth of other banks and the more intimate relations between the markets of the world. After the Baring crisis in 1890 it was generally felt that the reserve of the Bank of England was too small. The proportion to deposit liabilities which, in normal times, had been in the neighborhood of 40 per cent., was therefore increased to rather more than 45 per cent. Even this proportion is now thought by many to be hardly sufficient. The Bank of Germany holds about the same proportion of reserve as does the Bank of England, and the reserve of the Bank of France,

[1] There is, indeed, one kind of loan to which this statement does not apply —the foreign bills held by many of the Continental central banks; but see p 389.

for many years, has been notably greater than that of any other country.

The ability to earn reasonably satisfactory dividends, while maintaining these large reserves, may well be given a word of explanation. Central banks do not pay interest upon deposits, and where, as in the case of the Bank of England, large deposits are received from the other banks, a basis for remunerative business is secured. In Germany, and especially in France, the right of note issue provides the money for the reserve at practically no expense to the central banks, since notes may be substituted for money which would otherwise be required in every-day use.[1]

A highly important tho rather obvious consequence of the holding of large reserves should not be overlooked. Central banks do not in ordinary times make use of their entire lending power. They are a sort of reservoir of money and credit for use in emergencies. The other banks do lend to the full extent of their resources, and in the United States all of the banks follow that policy. The consequent absence of any reserve of lending power in the United States is a fundamental source of weakness in our system. Whether it can be best remedied through a central bank or in some other way is the central problem of this discussion.

In securing business in competition with other banks, a central bank experiences no difficulty when the available funds of the former are regularly insufficient to meet the demand for loans. Until quite recent times this was generally the case, and is still the constant situation in Japan and Russia. In western Europe generally the central banks have been able to secure only a diminishing proportion of the growing volume of banking business of all kinds. The resources of the other banks have increased

[1] An increase in the note issue of the Bank of England does not increase the banking reserve, because of the complete separation of the issue and banking departments since the Act of 1844

to such an extent that, except when business is very active, they are able to satisfy the entire demand for loans. In England, France, and Germany there are now banks which, measured either by loans or deposits, are larger than the central banks of those countries. The central banks are obliged to compete with the other banks for business, and, as will be pointed out later, upon terms which place them at a serious disadvantage. This tendency has been most pronounced in England, but only because of the more complete development of its banking system. Between 1897 and 1908 the average deposits and the average reserve of the Bank of England, while fluctuating not a little from year to year, showed no appreciable growth, being about £50,000,000 and £25,000,000, respectively. During the same interval the deposits of the other banks in the United Kingdom increased from £720,000,000 to £850,000,000. The published figures do not permit an exact comparison of the growth of loans, but there is every reason to believe that the showing would be no more satisfactory from the point of view of the Bank of England. There has therefore been a decided falling off in the proportion of the reserve to the total deposit liabilities of all of the banks. The experience of the Reichsbank has not been more satisfactory, tho it has the advantage of being able to strengthen its reserve through the substitution of notes for coin in general circulation. In 1897 its average reserve was £43,000,000, but it was hardly able to retain this amount during the following ten years of irregular tho generally active business. The rapid industrial development of Germany in recent years has been accompanied by at least equally rapid expansion of credit by the other German banks.[1]

[1] W Prion, Das deutsche Wechseldiskontgeschaft, contains by far the best account of the working of the German money market. For England, Bagehot's Lombard Street is indispensable; but upon the working of the banking system at present the reader should consult the admirable work which appeared only this year under the rather misleading title of The Meaning of Money, by Hartley Withers.

Not even the skilfully directed policy of the Reichsbank has been able to strengthen the foundation of the credit structure. The very considerable increase in the reserve of the Reichsbank during the last year is of no particular significance, since under any system, money commonly accumulates in the banks at times of acute depression. In France the reserve of the central bank has been notably increased during the last few years, but, it may be confidently asserted, not primarily or even largely because of special influence of the Bank of France. The industries of France change but little from year to year, either in volume or in general character. The accumulation of capital is extremely large, and there is constantly a surplus seeking investment. In France, as in other countries, the influences which in the long run determine its condition are largely beyond the control of the central institution.

This failure of central banks to increase their operations to an extent sufficient to retain a permanent proportion of the increasing total of banking business requires some detailed explanation. In part it is due to a relative increase in the kinds of business which central banks are unwilling to accept. The over-draft in particular has become to an increasing extent a favorite method of borrowing in the European business world. It has many of the advantages of the demand loan, familiar in American banking. The borrower pays only for so much of the loan as he actually uses. In all countries purely domestic business dealings seem to give rise to a relatively diminishing volume of commercial paper in the form of bills of exchange, the kind of paper which central banks are most ready to take. During the greater part of normal years, moreover, the central banks are experiencing increasing difficulty in securing any part of the business of the very highest class. This is largely owing to

the lack of flexibility in the terms upon which central banks are accustomed to accommodate borrowers. There are two official bank rates,—the rate of discount and a somewhat higher rate for loans. The market rates (that is, the rates of other banks and brokers) are highly flexible, corresponding to every slight variation in the character of the security, the duration, and other conditions of the loan. The best paper is therefore ordinarily not brought to the central bank, tho in Continental countries, shortly before maturity, it is often rediscounted in order to take advantage of the admirable collection facilities which these institutions have provided. The Bank of England has frankly recognized this situation, and for many years has followed the market rates in dealings with regular customers. The Reichsbank adopted the same policy for a number of years, but discontinued it in 1896, largely on account of agrarian protests.

The suggestion has frequently been made that, if in normal times the official rates were reduced to a level with the market rates, no difficulty would be experienced in securing all the business which a central bank might care to take. But this would not serve the purpose, because market rates would almost certainly recede still further. It is true that there are a number of long-established customs which give the official rates an indirect influence upon the market rates. In England and Germany, for example, the interest paid by the other banks upon time deposits, and the rates for certain kinds of loans,[1] fluctuate in a fixed relation to the official rate of discount. Even when the market is well supplied with funds, therefore, the market rates are seldom entirely uninfluenced by the official rate. But, if at such times the bank rates were further reduced, the market rates would

[1] In particular, rates on over-drafts and upon documentary foreign bills secured by perishable goods

almost certainly experience still further decline, and the effort of the central bank to secure additional business of the highest class would be unsuccessful.

The growth of the business of the other banks has tended to increase the fluctuations from week to week of the business of central banks in quite normal years. This is especially noticeable at the end of each quarter of the year. The various payments and transfers of credits and money which everywhere occur at those times make it necessary for the market to resort to the central bank. The requirements for these purposes may not have increased relatively to the total amount of banking business, but they have increased when measured by the growth of the business of central banks. During the last two weeks of December in recent years of active business, the loans of the Bank of England have increased by upwards of £15,000,000,—an amount probably equal to half the loans of the bank at other times. In Germany the same phenomenon may be observed, with this difference,—that in London deposit credits are sufficient for the purpose, while in Germany, owing to the slight use of checks, either specie or notes are required. To meet this requirement, it is proposed, in the bill for renewing the charter of the Reichsbank now under discussion, to allow a temporary expansion of the untaxed issue of the bank at the end of each quarter of the year. Requirements of this nature are quite normal, and are met without much difficulty by central banks, since they can be foreseen, and because the central banks do not use their entire resources at other times. On the other hand, they afford evidence that the growth of business of the other banks is placing an increasing burden upon the central banks.

In the United States the difficulties of a central bank from the causes mentioned above would be considerably greater than in any other country. It would experience

great difficulty in procuring business of the highest class because it would be obliged to enter into competition with powerful banks which already occupy the field. Moreover, it is to be expected that weekly fluctuations in quite normal years would be far more violent than in any other country. The greater volume of credit transactions would by itself have this effect. Account must be taken also of the extent to which this is still primarily an agricultural country, and its economic activities are of a highly speculative and unstable nature.

After this outline of the normal activities of a central bank, we are in position to consider in somewhat greater detail the minor functions of issuing notes and acting as government fiscal agent. The utility of central banks in the latter capacity is clear and unquestioned. Public receipts and expenditures are handled at little or no cost to the government, and the money market is subjected to no serious inconvenience. Even when revenue is largely in excess of expenditure, there is only that temporary tightening of money rates always incidental to the shifting of credits. The market rate of discount is advanced more nearly to, or even to a level with, the bank rate, and the central bank secures a larger portion of the total current business. The amount of government funds is, in the countries now having central banks, seldom large enough to impose great responsibilities or to create alarm at the power which an enormous surplus might give. The budgets of most countries are designed with an eye to equality of income and outgo, and only towards the close of the fiscal year, or after the issue of a war loan, are government deposits inconveniently large. In England, France, and Germany government balances are usually between twenty-five and fifty million dollars. During the last four years the maximum in France was $78,000,000, and in England $99,000,000. In both coun-

tries the balance is kept from falling below $20,000,000 by the issue of short-term government obligations. Finally, it should be observed that, as government fiscal operations follow much the same course year after year, their disturbing influence is minimized because it can be foreseen.

In the United States, however, the situation is very different. Fluctuations in government money holdings over short periods are perhaps not more considerable than in European countries, but the average amount of such holdings has for many years been enormously greater, with the possible exception of Russia, and of Japan during and just after the recent war. Changes in our revenue laws are made at infrequent intervals, and appropriations are authorized with little reference to probable income. Fluctuations in the amount of government funds are therefore of a wholly different character from those in European countries. In 1905 the Treasury cash holdings,[1] exclusive of trust funds, and the $150,000,000 gold reserve, were nearly stationary. During 1906 and the greater part of 1907 there was a steady upward movement, which carried the amount of government money from about $240,000,000 to more than $390,000,000. In recent months the tendency has been quite as strong in the opposite direction, and in December, 1908, the Treasury held only $266,000,000. Throughout all these years the Treasury held more than the maximum balances of England, France, and Germany taken together, and for much of this time more than the total deposits of all kinds of the Bank of England.

In magnitude, permanence, and in the nature of their fluctuations, the balances of the United States govern-

[1] The figures in the text are in each instance rather more than a hundred million dollars greater than the monthly returns of available cash in the Treasury, which offsets against cash holdings such current obligations as disbursing officers' balances.

ment are clearly quite unlike those of other countries. Placed in a central bank, they would constitute a permanent fund of enormous proportions, the use of which would give the bank a power far beyond anything known in banking history. But the manner of putting this vast sum into general use would be equally without precedent. Without doubt there would be a general demand that the deposits be used with some degree of approximation to the population and the supposed needs of different parts of the country. At this point an insurmountable obstacle would be encountered. To lend directly to the business community would require an impossible number of branches. Lending at the relatively small number of branches which we have assumed might be established would not accomplish the purpose. Here the example of the Bank of England fails to supply a precedent because of what may be termed the lack of fluidity in our system of credit. In England, and indeed in all countries which have central banks, it matters little whether the central bank makes loans in a single place or generally throughout the country. If, for example, the Bank of England makes advances in London, it relieves the pressure for loans upon the other banks. They are then in position to lend more freely at any of their numerous branches where there may be an active demand. The entire country is served by the several thousand branches of less than one hundred banks, most of which have their head office in London. Similar concentration, and in some instances to an even greater extent, is found in other European countries. In the United States banks are not permitted to operate branches under the national and most State banking laws. Consequent absence of banking concentration rather than the absence of a central bank is the most fundamental difference between banking in this and in other countries. Elsewhere the

central bank is simply the final step in banking systems, which without it would in any case be highly centralized.[1] How fundamentally important is this preliminary concentration will appear in our analysis of every activity of central banks.

In order to distribute its funds widely, the central bank would be obliged to lend to at least as many banks as there are localities; and, since the selection of a single bank would give rise to charges of favoritism, the bank would be certain to lend to all the banks. There are now nearly seven thousand banks in the national system, and, if any distinct advantage were to follow, the State banks would doubtless generally enter the system. The central bank would be obliged to decide between the claims of fifteen thousand or more banks. To estimate the quality of the securities offered by the various banks would be no easy problem, tho slight compared with the difficulty of determining the amount to be lent to each bank. How determine the relative needs of a large New York or Chicago bank, on the one hand, and of rural banks in Wisconsin and Texas, on the other? The withdrawal of funds, when thought desirable upon general grounds, would be a yet more delicate undertaking. The withdrawal of credit from a single reservoir reduces the general level. If a given quantity is to be taken from thousands of reservoirs, it becomes necessary to consider the supply in each, and to fix upon those which can endure the loss without dangerous shrinkage. Consideration must also be given to the likelihood that complaints will be made that neighboring reservoirs have not contributed their fair quota. From whatever side the subject is approached there seems no escape from the conclusion that a central bank would not be able to handle

[1] There is, indeed, comparatively little banking concentration in Japan. But the Bank of Japan has unusual powers of control, owing to the scarcity of capital in that country The other banks are constantly obliged to resort to it for loans.

the deposits of the government in such a manner as to give general satisfaction and escape general criticism. It is not improbable that they would have to be distributed in some more or less permanent fashion analogous to our existing arrangement. The possible advantage over our present system would be slight, and would be hardly perceptible if the present system were modified by the simple requirement that the Secretary of the Treasury should deposit in the national banks all surplus funds beyond a reasonable working balance.

An elastic currency is the panacea which has been most generally prescribed for our financial ills, and it is largely because a central bank is believed to be an effective means to this end that its adoption has been urged. This is not, indeed, always a function of central banks. The Bank of England cannot increase its note issues except by impounding an exactly equivalent amount of gold in its issue department. Elsewhere the monopoly of issue is subject to less drastic restriction, and the notes are a true credit currency, expanding and contracting with variations in business requirements. Confining our attention to the use of notes in normal periods and taking for consideration France, in which the check habit is not very general, it appears that the average volume of notes in circulation has steadily increased and is now nearly five thousand million francs, and the difference between the maximum and the minimum amount in circulation in a year is often as much as five hundred million francs. In England, where deposit banking is familiar to all, there are no such wide variations in the demand for currency, the amount of money of all kinds in circulation fluctuating within the extremely narrow limits of three million pounds. In the United States the use of checks is quite as general as in Great Britain, but the relatively greater importance of agriculture causes wider seasonal

variations in the demand for money. The steady growth of the check habit in purely rural communities seems, however, to be causing a relative decline in this demand. Notwithstanding the increased agricultural production and higher prices, it shows no tendency to increase, tho it varies much from year to year. The national bank returns for the last ten years indicate an autumnal requirement at most of about $50,000,000. A somewhat greater shifting of funds between banks doubtless occurs, as the banks in the crop-growing regions naturally increase their money holdings rather more than the actual outflow. In any event, our seasonal requirements are certainly well within the limits of the circulation of the Bank of France, and there is fair ground for maintaining that they could be supplied by an institution with similar powers, if there were no other obstacles beyond mere magnitude to be taken into the account.

Our difficulties would appear, as in the case of government deposits, as soon as the attempt was made to place the notes where they are really needed,—in agricultural sections of the country. It would be necessary to deal with each bank in the crop-growing regions separately. Further, if a central bank were to issue notes, the demand for them would not be confined to the crop-moving period or to banks in agricultural regions. When a single bank has the monopoly of the issue, the notes acquire somewhat more the full characteristics of money than is the case when notes are issued by many competing banks. In particular they are almost equally serviceable for purposes of reserve against deposit liabilities. It is reasonable to expect, therefore, that bankers generally would be eager to secure them. As in the case of government deposits, the central bank would be forced to decide between the conflicting claims of thousands of banks, each urging its own local needs. Once more the absence of

branch banking presents itself as a formidable, it would seem even insuperable, obstacle to the successful exercise of an important function of central banks of the European type.

Even if the notes were made unavailable for reserve purposes by statute, the general demand for them would not be greatly diminished. A bank securing the notes could easily substitute them for an equivalent amount of other kinds of money previously in general circulation, and retain the latter for reserve purposes. It would only be necessary to follow the existing practice with regard to the existing bank-notes, which are commonly selected from current money paid in to the bank for early payment over the counter. By this easy method $100,000 in notes could be used to secure $100,000 in gold or other reserve money, which would serve as a basis for several times that amount of loans and deposit liabilities.

It cannot be too strongly insisted upon that the experience of other countries with notes issued freely by a central bank affords no adequate indication of the probable effects of such an issue in the United States. There is a wide difference between Anglo-Saxon countries and the countries of Continental Europe in the extent to which checks are used, and consequently in the possibility of credit expansion in the form of deposits. Changes in the deposits of French or German banks, for example, are almost entirely due to the direct receipt or payment of cash or notes. In England and in the United States the principal cause of change in the deposits of commercial banks is the increase or decrease in the volume of loans. The borrower ordinarily wants a credit at the bank against which he can issue checks, and those who receive the checks have equally little occasion for actual cash. The significance of this difference can best be shown by an illustration. When deposits increase in a German bank,

we may be reasonably certain that they have more money to lend, and that, when they make loans, they are obliged to pay out more money or notes. When American banks have more deposits, it usually means that they have already increased their loans. In Germany, if a bank secures through rediscounts notes from the Reichsbank and makes further loans on its own account, it will find that, aside from stock exchange and other dealings of a similar description, it can lend but little more than the amount of the notes. In the United States the notes would serve, after being replaced by lawful money withdrawn from circulation as a basis for deposit credit to several times their amount. Something like this takes place under our present system, and it gives banks as a whole a sort of diffused profit from note issue which is not generally recognized.

It is highly improbable that the notes of a central bank would speedily return to it when once put out in circulation, except when the central bank contracted its loans. The process of contraction would be disturbing, because it would involve a contraction several times as great in the loans of other banks. The conclusion would seem to be inevitable that with a highly developed deposit credit system the note of a central bank is a dangerous instrument, tending towards inflation. It has apparently been some more or less well-thought-out reasoning of this nature that has led the best English opinion to oppose proposals that the Bank of England be allowed to issue a credit bank-note.

It may be questioned, moreover, whether it is entirely desirable that there should be a system of note issue so elastic as to free the banks from moderate seasonal requirements for actual cash. The deposit is an obligation for payment on demand, and the actual demand for cash from time to time serves to remind bankers of that

very important fact. It enforces a sort of taking account of stock, and brings home to the banks the necessity of keeping their house in order at all times. Where deposit banking is not general, doubtless credit in the form of notes must be elastic. But for countries like England and the United States restrictions on note issue exercise a much-needed restraining influence. A credit structure which cannot endure without perturbations the temporary withdrawal of, say, 5 per cent. of its cash foundation would seem to require some change in its business methods rather than devices for further credit expansion. Normal seasonal variations in credit requirements could be readily met if our banks were less given to the habit of lending to the full extent of their resources in months when the course of business gives them an abundance of cash.

II.

The Precautionary Stage.

The husbanding of resources which has been emphasized as an essential feature of the policy of central banks in normal times might be thought to belong to the second or precautionary stage of their operations. For purposes of exposition, however, there is some advantage to be gained by simply grouping in that stage actual steps taken by central banks to restrain the expansion of credit and to strengthen their reserves. The essence of the distinction is that in the first stage the central bank, however carefully it may husband its own resources, leaves the market free to follow its own course, while in the second stage it endeavors to subject the market to a certain measure of control.

In the exercise of this function the central bank seeks to govern the market by the wise combination of per-

suasion and control. A variety of devices are resorted to, in part dependent upon the circumstances of the particular case and in part the result of customs and traditions which have been developed in different countries. Some of these devices are entirely within the direct sphere of operation of the central bank, while others require the co-operation of the other banks or the control of their operations. The Bank of France relies largely upon the device, peculiar to itself, of a premium upon gold withdrawn for export. In Germany the Reichsbank is said to be able to prevent gold exports by agreement with other banks, even when there would be a clear and immediate profit from the operation. Many of the central banks facilitate gold imports by advances upon gold in transit. The Bank of England can within narrow limits change its buying and selling prices for gold in bars and for foreign coin. Most of the Continental central banks regularly hold considerable quantities of foreign bills, which can be used to check gold exports and to secure gold imports. This device is the main reliance of the Bank of Belgium; it is of very great importance in the case of the Bank of Austria-Hungary; and it seems to be regarded with increasing favor at the Reichsbank and the Bank of France. Its effectiveness would largely disappear if it were universally adopted. It is noteworthy that the bulk of the foreign bills thus held are upon London, to which the rest of the world seems to look more and more as the one certain and immediate resource in times of emergency.

One device, however, the sliding scale of discount, is made use of by all central banks, and, with hardly an exception, is of pre-eminent importance.

The primary object of an advance in the rate of discount is to influence foreign exchange rates, to check gold exports or to stimulate gold imports, by increasing

the investment holdings by foreign banks of bills drawn upon the country. A quite secondary object is to diminish the demand for domestic loans. Success is always dependent upon whether the market rate follows the bank rate. To bring this about is the most frequent, if not the most serious, task of a central bank. When the strain upon the reserve is merely anticipated or of moderate proportions, it is frequently difficult to make the market follow the bank. If the other banks have abundant funds and if the necessity of caution is not obvious, the immediate effect of the advance of the bank rate upon the market rate may be imperceptible. The central bank will then secure little new business. In countries where its proportion of the lending business is large, it is true that the increased demand for loans at the other banks will soon force up the market rate. But, as has already been pointed out, the business of central banks has become small in proportion to the total credit business in most countries. It has happened with increasing frequency that the outside market has been able to shoulder the entire lending business without advancing rates to the point desired by the central banks. In recent years both the Bank of England and the Bank of Germany have found it necessary with increasing frequency to deprive the market of its surplus funds. This is accomplished in England by the sale of government securities, and in Germany by the rediscounting of Treasury bills. This device has answered its purpose to a striking degree. Its effectiveness is a direct consequence of the narrow foundation of balances with the central bank, upon which rest the vast liabilities of the other banks. In London, for example, it is supposed that bankers' balances may amount to half the total deposits of the Bank of England, say £25,000,000. If these balances are reduced even by a million pounds through the sale

of government securities by the Bank of England,[1] the other banks are obliged to contract their loans and reduce their deposits by many times that amount, in order to preserve the customary proportion of balances to their credit liabilities. The credit structure is so delicately poised upon its foundation of Bank of England balances that it is sensitive to very slight influences.

Many English observers have questioned whether the extent to which the concentration of reserves has been carried does not seriously imperil the foundation of the entire financial structure. The heavy burden upon the reserve of the Bank of England makes the London money market exceedingly sensitive to even slight temporary influences, especially those which may cause the withdrawal of gold for export. The discount rate is advanced more frequently than would probably be necessary if reserves were larger. Repeated efforts have been made to secure united action among the London joint stock banks, looking towards the provision of some reserve in their vaults or a special reserve deposit at the Bank of England. Altho this change might strengthen the system in some respects, it is also probable that the market would then less easily be brought to follow the lead of the central bank in its discount policy. While the responsibilities of central banks are increasing, the most important instrument at their disposal in the performance of their heavy duties has not become more effective. No specific instance has yet occurred to show that the burden has become too great, probably because the principles which should govern a central bank have become more

[1] The balances of the other banks would almost certainly be reduced by this step unless the securities were sold to individual depositors of the Bank of England If the securities were purchased by the other banks or by their customers, checks in payment would swell the clearing-house exchanges of the Bank of England If they were sold to bill brokers or their customers, the result would be the same, tho there would be one or more additional transfers of credit required to complete the operation

clearly understood by bankers and the public, and a tradition has been developed which makes it possible for the central bank in most instances to govern by persuasion rather than resort to force.

Since every unusual demand for money falls upon the central bank, it would be to its advantage, were that possible, to eliminate the dishonest and reckless management of particular banks. History does not afford any clear indication that central banks have been able to effect much in this direction. It might also be expected that something would be accomplished by example and precept to moderate general tendencies towards the dangerously rapid expansion of credit by the banks as a whole, but here also it would be difficult to cite specific instances of successful endeavor.[1] General speculative movements are less violent in Europe than in the United States, but this difference is properly ascribable to the greater opportunities for rapid development in a new country with large undeveloped natural resources. Germany, which in late years has been in manufactures and commerce virtually a new country, has experienced highly speculative movements, which the Reichsbank has been seemingly powerless to control. After all, a central bank can do little more than husband its own resources for the future, at a time when the other banks have abundant funds and a spirit of general over-confidence pervades the business community.

All the devices made use of by central banks, as they exist in other countries, in the precautionary stage of their policy have one common characteristic: they are designed to improve matters by influencing the foreign exchanges. The prevention of a foreign drain and the attraction of gold from other countries is the one object

[1] In the autumn of 1906 the Bank of England was able to place a slight check upon the enormous advances being made by London bankers to New York financiers by means of finance bills

in view. Little direct influence is brought to bear to strengthen the domestic banking situation by reducing the aggregate of credit advances. Very high discount rates may reduce somewhat the demand for loans for purely domestic purposes, but not necessarily, or even probably, the demand for those which are most undesirable. Foreign borrowing alone is likely to be diminished to an appreciable extent by the ordinary advances in rates. The negotiation of finance bills by foreign bankers may be made unprofitable, and the holding of commercial bills for investment abroad may be increased. By this means the total volume of loans in a market constituted like that of London may be considerably diminished. The foreign trade and financial operations of the leading European countries are of enormous magnitude, both absolutely and relative to the total business of those countries. Many of the great crises during the nineteenth century were precipitated, and at least in part caused, by events occurring in other parts of the world with which Europe has close financial relations. The purely domestic and economic activities of old countries are comparatively stable, and seldom give occasion to inordinate speculation. Any arrangement, therefore, which succeeds both in strengthening the central bank and also in placing a somewhat restraining influence upon foreign speculative operations, is one which affords protection against the most serious weakness threatening the European financial world.

When we turn to the United States, we find a situation strikingly and fundamentally different from that which we have just described. Our financial troubles are of domestic origin. Not one of our crises has been precipitated by events occurring in other countries.[1] Our for-

[1] The Baring failure in 1890 greatly increased the usual strain of the autumn months in New York, but, tho economic conditions were far from satisfactory in the United States, no crisis occurred

eign trade and investments, compared with those of European countries, form a small part of our total economic activities. Our exports of foodstuffs and raw materials have a broad and fairly stable market, while our imports, largely of luxuries, respond quickly to every change in the consuming power of the people. We have no appreciable amount of capital invested abroad, and a diminishing proportion of capital employed in the country is of foreign origin. Moreover, we do not finance any considerable share of our foreign trade. Bills drawn against our exports are usually discounted in Europe, and our imports are secured through commercial letters of credit, which also give rise to bills which are accepted and discounted in European money centers. The element of weakness in our foreign exchange position is found in the enormous temporary obligations incurred during the periods of active business by American bankers through the issue of finance bills. If a central bank is to strengthen our credit structure, it is certainly not to be accomplished by the attraction of further amounts of foreign money through high discount rates. In only one way does it seem possible that a central bank might secure assistance from foreign sources without an addition to our current obligations. It might conceivably in normal times hold a large amount of foreign commercial bills instead of following the present custom of sending them abroad at once for discount. This policy would, however, be regarded as a menace in European markets to be guarded against at all cost. It would not in the slightest degree enable the central bank to exert a restraining influence on domestic business activities. It would be simply a device to draw more money from Europe in emergencies,—a power which is already the most disturbing factor in the European money market.

Our financial troubles are almost wholly due to causes

which may be traced to our domestic economic activities. In periods of prosperity the expansion of loans is peculiarly rapid, partly because of the abundant opportunities for development in a new country and in part because of the general use of deposit credits. It would be incumbent upon a central bank to control or moderate this tendency, especially when borrowers were using the proceeds of loans in hazardous speculative enterprises or were relying upon them to supply deficiencies in working capital. Raising the rate of discount after the European practice would not avail. It does not have any considerable effect in this direction even in Europe, except upon loans of foreign origin.

Even such a slight moderating influence as an advance in the rate of discount may have elsewhere upon the volume of purely domestic loans would probably be lacking in this country, because there is every reason to fear that the central bank could not make its rate effective. In preceding pages we have seen that a variety of influences are present in countries with central banks, which give them some control over market rates. Among these may be mentioned prevalent banking customs, a delicately poised money market, fluidity of credit, and the possession by the central bank in normal times of some share in the current loans to individuals. No one of these factors taken alone is indispensable, but in the absence of any one of them the others must be correspondingly more powerful. Banking customs, such as the relation of the interest rate on deposits to the bank rate, cannot be created off-hand. They were the product of slow growth at a time when central banks occupied a commanding position and when other banks were in the course of development.

The fluidity of credit is absent in this country, and will remain absent while we wisely continue to prefer banks

managed by persons with extensive local knowledge to branch banks subject to bureaucratic managers, acting under general rules laid down at a distant head office. For this reason also we cannot expect our money markets to be subject to the comparatively slight and distant influences exerted by a central bank. It would be necessary to concentrate bank reserves to such an extent that every banker would feel that his safety depended upon the situation of the central bank. Whether a central bank conservatively managed could secure business of the highest class is by no means certain. We have already noted the difficulty experienced by central banks in Europe, as a direct result of the growth of other banks. In this country we already have a highly developed banking system, and, if a central bank is to be successful, it must succeed in taking business away from existing banks, leaving them, it may be added, with loans somewhat inferior in quality. From every point of view it seems extremely unlikely that the sliding scale of discount could be made effective in this country, and, even if that were possible, it does not seem to be a device which is likely to strengthen our credit structure to any appreciable extent.

It is significant that, altho the results expected are similar to those achieved in Europe, the various plans[1] which have been proposed for a central bank in this country are for a kind of bank quite unlike anything found elsewhere. While exhibiting considerable differences in details, the plans are in substantial agreement as to essentials. It is proposed to establish a bankers' bank pure and simple, which is to transact business principally, if not solely, with the government and the banks, both of which are to share in its ownership and management.

[1] See, *e.g.*, Report of the Comptroller of the Currency, 1907, p 71, and P. M. Warburg, "A Central Bank," in Proceedings of the American Economic Association, 1908.

It is also to have the power to issue notes and is to hold the bankers' deposits now held by banks in reserve and central reserve cities. Presumably also it would secure deposits from banks in the central reserve cities.

The advocates of this proposal have been impressed with the defects in our banking system in times of emergency and have sought earnestly for a remedy, but, unfortunately, they have overlooked the effects of a bank of this kind in normal times and especially when precautionary measures may serve to minimize an emergency and even prevent its occurrence. A bank organized upon the lines described above would have one fundamental defect, so serious as to destroy its power of usefulness. It would not be able to exert a restraining influence upon the expansion of credit, because it would have no means of carrying out a precautionary policy. Bearing in mind what has been said on previous pages,[1] the consequences of an issue of notes by a bank of this kind will be readily understood. Is it not certain that, in the eager search for funds in times of active business, the other banks would resort to it for heavy loans? Doubtless a considerable measure of accommodation would have been thus granted if we had possessed such a central bank in the years before the crisis of 1907, even tho it had been managed with far more conservatism than we have any reason to be certain of securing at all times.[2] Every dollar thus borrowed would have been an addition to the extension of credit at a time when restraint was needed, not expansion. The central bank would have been creating a certain amount of credit expansion, which its later power of contraction could certainly not have ex-

[1] See pp. 383–8

[2] Recent history affords no assurance that the government influence in the management of a central bank would be always found on the conservative side. See the article on "The Banks and the Treasury under Secretary Shaw," by Professor A P Andrew, in this Journal for August, 1907

ceeded and probably could not have equalled, because the volume of credit cannot be largely diminished without serious disturbance. The power to issue notes by a bank of this kind would be a positive evil unless it were strictly reserved for use only upon occasions of actual emergency.

The possession of the bankers' deposits might at first sight be expected to give the proposed central bank some control over the expansion of credit. If it should secure the bulk of the bankers' deposits now held in reserve and central reserve cities, it would then keep unquestionably a larger reserve against these deposits than is held by existing banks. With these deposits and the government balances a central bank might be able at the outset to acquire a commanding position in the banking world. The other banks generally might be forced to resort to it for accommodation, and, since the loans of the reserve and central reserve city banks would have been greatly diminished on account of the loss of bankers' deposits, no net expansion of credit might follow. It is by no means certain or even probable, however, that the other banks would remain permanently dependent upon the central bank after a sufficient time had elapsed for new capital to enter the banking field. From that moment its power of restraint would cease.

It is unnecessary to discuss further the possibilities of a bank conceived upon these lines. Aside from the extremely doubtful results which might follow from its activities, it is unthinkable that any one, much less those concerned with the management of our existing banks, would be prepared to see our entire credit system become constantly and directly dependent upon a single institution. It has been given passing notice, because it illustrates very clearly the practical impossibility of securing through a central bank anything like effective guidance

or control of the credit operations of a system composed of many thousands of banks.

There remains a further alternative for consideration. Altho a central bank might be unable to exert a restraining influence upon the expansion of credit, it may be urged that by refraining from the issue of its notes in ordinary times and by maintaining a large reserve it would increase the power of the banks to cope with emergencies. A familiar illustration will make evident the undesirable consequences which would follow the establishment of a central bank of such restricted scope. For many years we have had something of the kind in the independent Treasury system. During much of its history it has held large surplus funds which have been turned over to the banks in times of real or fancied need. The banks have not been obliged to depend entirely upon their own resources, and have not, therefore, given sufficient heed to indications of approaching emergency. Let us not delude ourselves with the notion that a central bank of this kind, which would be a mere crutch, would be able to achieve results similar to those which have been secured in countries where the central bank is the very heart of the credit organism. Some share in the loans made directly to the business community or a condition of constant dependence for the other banks (as in Japan) is absolutely essential, if a central bank is to be able to exert a restraining influence. Otherwise it will simply play the rôle of the unwise parent whose indulgence weakens the sense of responsibility and lightens the penalty for lack of foresight.

III.

The Activities of Central Banks during Crises.

Analysis of the activities of central banks during periods of acute financial strain cannot be separated from the consideration of their normal and steady operations. If in normal times and during periods of moderate strain such an institution does not seem likely to fit into our system, it becomes obviously out of the question to seek by this means a remedy for more acute financial disturbances. But the success which has crowned the efforts of central banks in handling crises suggests the wisdom of studying their methods, with the object of applying them to our own situation, if perchance they may prove to be independent of any particular form of banking organization.

In times of acute financial panic the central bank plays an active dominating rôle. Upon it rests the responsibility for maintaining specie payments, and also in large measure for the continuance of lending facilities to the business community. This responsibility was not clearly recognized, and the policy which should be followed in such situations was not clearly understood in the latter part of the eighteenth century and the early years of the nineteenth century. In some instances, loans were restricted, with disastrous consequences not only to business, but to the central banks as well. In other instances, loans were granted freely, but without that concomitant advance in the rate of discount required to influence foreign exchange rates and to drive away borrowers whose needs were not urgent.[1] For the last forty years at least the policy which should be followed has been

[1] MacLeod's Theory and Practise of Banking contains the best account of English banking experience during crises before 1860 See chapters ix, xi, and xii

clearly understood, largely owing to Bagehot's reiterated expositions in the *Economist*, finally embodied in more permanent form in his *Lombard Street*.

The policy of liberal loans, tho at high rates, and the payment of money or notes to all depositors who for any reason whatever may require cash, are now everywhere recognized as the guiding principles of action in emergencies. More recently still another method of relief has been adopted in practise, if not in theory. Central banks have at times taken the lead, as in the Baring instance, in arrangements for the conservation of the assets of large banks which are not hopelessly insolvent, and by preventing sudden liquidation have confined the disturbance within narrow limits. In this matter the central bank has no very marked advantage over the clearing-house organization in American cities. The machinery for united action will hardly be set in motion in the absence of some person of commanding influence in whom the business community has confidence. In carrying out the crisis policy as to loans and cash, a central bank does not require any previous agreement with the other banks. Whether the same course of action can be followed in the United States, where in the absence of a central bank such agreement is necessary, and, if so, with equally good results, is the problem which now presents itself for examination.

In one important respect the course of American crises has been strikingly unlike many of those in Europe. The foreign exchange situation has not been the storm center in the United States. Even in 1893, when our currency was redundant through causes beyond the control of the banks, the export of gold was an influence in precipitating the crisis, primarily because the intention as well as the ability of the government to maintain the gold standard was doubtful. Moreover, we have never

experienced any difficulty in securing abundant supplies of gold from Europe after the outbreak of crises, with the solitary exception of the first weeks of the crisis of 1893. As early as 1857 we were able to import over $6,000,000 in the course of a few weeks,—an amount which was equal to about half the reserves of the New York banks at that time. The enormous importation of about $100,000,000 in 1907 is within the recollection of all. It has been argued that the heavy importations of 1907, as well as those during some of the other crises, are in part to be attributed to the currency premium, which made it possible to import gold at a profit, even when exchange rates were above the normal export point. But it is important to observe that gold exports were engaged before there was any premium upon currency. Moreover, only so far as foreign exchange rates which were quoted in the medium of certified checks failed to advance *pari passu* with the depreciation of the checks, was the currency premium a factor in the situation. After all, the movement of commodities and foreign credits are the principal influences determining gold movements, and neither of them is strengthened by the suspension of cash payments by the banks and the consequent currency premium.[1]

Much importance has been ascribed by those who favor a central bank to the absence of the domestic bill of exchange and of the bank acceptance in the American business world. It is urged that satisfactory results through the operations of a central bank cannot be secured unless the bill of exchange comes into general use, and that its absence is a fundamental cause of the

[1] The gold imported during the crisis of 1907 was almost entirely secured through the discount of trade bills During the spring and summer months it had been impossible to negotiate the usual amount of anticipatory bills in Europe. Consequently, the enormous autumn sales of American commodities abroad provided the means of payment for the gold which was imported.

lack of liquidness in the assets of the banks.[1] But, in drawing this conclusion, form rather than substance has been regarded. Bills of exchange are more liquid than other assets in emergencies, because the central banks are more willing to take that form of security. The main essential is that a central bank shall not have exhausted its power to lend before the emergency occurs. The experience of the clearing houses in connection with the issue of loan certificates shows that our banks have abundant security to offer, if there were some reservoir of unused credit at which they could be exchanged for some kind of acceptable purchasing power. But a central bank is not the only possible means of providing this reservoir of credit. Fortunately, a more simple means is at hand. It is only necessary that the banks which hold banker's deposits adopt the practise of maintaining in normal times somewhat larger reserves than is now customary.

With regard to the continuance of loans during crises the defects in the working of our banking system appear at first sight extremely serious. Not only during crises, but also in years of less serious strain, rates for loans have soared to extraordinary levels far beyond anything known in other countries; and at times reports are cur-

[1] The bill of exchange has a certain vogue, because it arises out of business transactions, the termination of which will in due course provide the means of payment This is by no means always the case, however The accommodation bill was more than a bugbear to bankers of former generations, and in recent years the bill, accepted by one bank and discounted at another bank, has provided the means for highly speculative undertakings The extensive use of such bills in Germany before 1907 weakened the entire credit structure, altho through a happy combination of good fortune and skilful management the threatened collapse was avoided. See W. Prion, Das deutsche Wechselgeschäft, pp 150, 189, 242, and Deutsche Oekonomist, 1908, pp 456, 489.

In the United States the bank acceptance would be peculiarly subject to abuse on account of the large numbers of banks Moreover, a firmly established business usage would seriously restrict the use of the commercial bill of exchange Firms of the highest standing regularly take all the trade discounts which are offered for prompt payment, borrowing, if necessary, from the banks on their notes Promissory notes are mostly given in payment for commodities by firms whose resources and credit are relatively inferior, and the situation would not be altered if the bill of exchange were to take the place of the note

rent that no loans can be secured upon any terms. More careful examination of the facts will show that this impression is not a little exaggerated. The banks in general have always taken care of their regular customers, often exacting no advance on the rates at which they have been accustomed to lend. The borrowers who have experienced great difficulty are those who depend entirely upon the distribution of their paper to many banks through note brokers, and those who borrow upon call or time against collateral securities for investment or speculative purposes. The statistics of the loans of the national banks which appear in the reports of the Comptroller of the Currency afford conclusive evidence that no wholesale and rapid curtailment of loans has taken place even in months of extreme panic. Between May and October in 1893 the total loans of the national banks were reduced from $2,161,000,000 to $1,843,000,000, slightly more than 15 per cent. But during that period, chiefly because of failures, the number of banks was reduced from 3,830 to 3,781, thus accounting for at least a part of the loan reduction. Moreover, this contraction was apparently spread pretty evenly over the entire period of five months. The July returns show that loans had been reduced by $140,000,000, leaving $180,000,000 to be accounted for in the three succeeding months. In 1907 there were comparatively few bank failures, and the general economic situation was far less unsatisfactory. Between August and December, 1907, loans were reduced from $4,678,000,000 to $4,585,000,000, almost exactly 2 per cent. In many of the cities of the country there was a slight increase in loans. In New York the loans of the national banks increased from $712,000,000 to $775,000,000, altho, on account of the difficulties of the trust companies, it is probable that there was no actual increase of loans in that city.

The contraction of loans would therefore seem to be wholly incommensurate with the commotion in the loan market which characterizes our crises. The banks evidently make an effort to convert their loans into money, but this effort is not successful. Each bank follows the course which is effective when a small number of banks find it necessary to diminish their liabilities. Let us take the call loan as an example. When a few banks demand the payment of these loans, the brokers, to whom they are principally made, secure loans elsewhere, and the banks calling the loans are paid. The total volume of call loans is not much changed. Within narrow limits it may be possible to reduce the aggregate of such loans by sales of securities to persons able to pay for them outright. It is also possible to secure additional margins from customers for whom brokers are carrying securities. But when all banks call their loans, they cease to be convertible into money. Purchasers who might be able to pay for securities outright become frightened, and little or no contraction takes place, while panic and alarm are generally increased. It usually becomes necessary to form a money pool, as was the case in the first week of the panic of 1907. This is nothing more than an agreement among banks to bring about what the banks in ordinary times do without agreement. In European countries the call loan, as well as other loans, is convertible, not because it is paid, but because the central banks stand ready to supply the necessary credit to borrowers whose obligations must be met. In this country it should be more clearly understood that here also no class of loans, not even call loans, can be diminished suddenly to any considerable amount. A given volume of business cannot be deprived of that amount of credit with which it has been customarily carried on. Attempts to do so involve direct loss, not only to borrowers, but to

the banks, and they also weaken public confidence, which more than the cash reserve is the real foundation of any system of credit.

Another cause of violent fluctuations in the rates for call loans is quite independent of our banking methods. In all European stock exchanges, dealings are with reference to fixed settlement dates, either fortnightly or monthly. Our method of daily stock delivery involves constant shifting of loans, which is a serious menace in times of crisis. It explains more than all other causes the fluctuations in call loan rates in this country. It also causes sudden and unnecessary fluctuations in the quoted prices of shares, and stimulates the attempts of speculators to corner particular stocks.

The clearing-house loan certificate is a device similar in its purpose to the money pool. The latter secures the continuance of loans from day to day for a particular purpose. The clearing-house loan certificate is designed to insure the continuance of loans of all kinds throughout the period of an emergency. It was devised after the crisis of 1857, which brought home to the New York banks the disastrous consequences of the policy of loan contraction to themselves, as well as to the business community. The banks had been unable to agree upon a liberal loan policy, because of the fear of unfavorable clearing-house balances, which would have to be met by banks making loans freely to banks which pursued a more selfish policy. The clearing-house loan certificate makes it possible for banks to lend freely, without fearing the loss of cash on this account. It takes away much of the advantage which might be derived by banks which restricted their loans. The issue of these certificates does not in the slightest diminish the obligation to pay individual depositors their money on demand, or the obligation to pay banking depositors outside the clear-

ing-house association. It is a device which in its origin had reference primarily and solely to the lending policy, not to the reserve policy of the banks. The clearing-house loan certificate is absolutely essential, in the absence of a central bank, to secure united action as regards loans during a crisis, and it has never failed to be entirely adequate for the purpose. Unfortunately, the use of this device seems to be thought by many to involve, or at least to hasten, the suspension of cash payments by the banks. If this be, indeed, one consequence of its issue, it must be confessed that the remedy is quite as bad as the disease which it is designed to cure.

That the use of the clearing-house loan certificate does not necessarily involve the suspension of cash payments is quite certain. Loan certificates were issued in 1860, and the banks did not suspend; and again in 1861 without suspension until early in 1862, when suspension ensued from causes entirely independent of their issue. They were issued at the end of 1863, in 1864, and more recently in 1884 and in 1890. On three occasions only their issue was closely followed by suspension,—in 1873, in 1893, and in 1907. On all of these occasions, suspension began when the banks required their depositors to stamp upon their checks the ill-omened words, "Good through the clearing house." Instead of confining the clearing-house loan certificate strictly to payments between banks, the banks have virtually required their individual depositors to accept a sort of payment which the banks could satisfy by means of a loan certificate. The actual use of the clearing-house certificate as currency in some of the Western and Southern cities carries suspension but little further.

The issue of loan certificates does not diminish the amount of money held by the banks of a city taken as a whole. If the stronger banks make use of the certificates

in meeting clearing-house balances, the weaker banks may be forced to suspend, and general suspension is then pretty certain to follow. To meet this danger, provision was always made, until 1884, for the equalization of reserves when the issue of clearing-house loan certificates was authorized. In 1873, it is true, partial suspension was not prevented by this means. But the New York banks then paid out a much larger proportion of their reserves than in later crises; the currency premium was of shorter duration and it did not reach so high a level; payments to outside banks were continued and the movement of commodities was not seriously interrupted by the dislocation of the domestic exchanges.

Suspension, when limited to payments to individual depositors whose requirements are largely local, is comparatively harmless. But our city banks have another class of depositors to whom their obligations are, at least in New York, nearly as great as those to their individual depositors. Reference is, of course, made to deposits of outside banks. In dealing with them, the city banks have resorted to suspension pure and simple. Most of the requirements of the individual depositor can be served with checks payable through the clearing house. But when a distant bank demands the return of the reserve which it has on deposit with the city bank, nothing short of actual cash will serve the purpose. Failure to meet such demands fully and without delay precipitates suspension everywhere. Moreover, it has an incomparably greater disturbing effect upon general business activities. Purely local business, aside from pay-rolls, can be carried on after a fashion with checks, but, when the domestic exchanges are dislocated, the movement of goods between different parts of the country soon comes to a standstill.

When city banks accept bankers' deposits, they incur

a heavy responsibility analogous to that of the central banks in Europe. While our banks have recognized the necessity of a liberal loan policy in time of crisis, they have not learned the unwisdom of hoarding their reserves. The national banking law, with its reserve requirements, seems to have blinded our people to the principal purpose and right uses of a reserve. It is not designed to insure a certain percentage of return to depositors in case of failure. A reserve is designed for the use of the many solvent banks in times of emergency, and not for the few insolvent banks. The payment of money to depositors, regardless of what proportion of reserve to liabilities may remain, is the one means which the experience of all banks shows to be effective in allaying panic. In adopting this remedy, the power of issuing notes is advantageous, but not indispensable. It saves the specie reserve from depletion, but in its absence it is only necessary to keep in ordinary times a larger reserve than would otherwise be required.

The panic of 1907 afforded convincing evidence that the fundamental cause of our repeated suspension of cash payments in time of panic is the ignorance of our bankers of the only method which experience in other countries has shown to be uniformly successful in allaying financial panics. During the last two weeks of October the reserve of the New York banks fell from $265,000,000 to $224,000,000, and there was then a deficit of $39,000,000 below the 25 per cent. reserve requirement. Thereafter the actual reserve was allowed to decline only $9,000,000, and during the two remaining months of the year, while a premium was being paid for money, the reserve was even increased to $251,000,000. An illuminating indication of the unsound principles upon which the policy of our banks was based is found in a recent address of the President of the New York clear-

ing-house at the time of the crisis, which is so significant that it may be quoted at some length:—

The Clearing-House Committee knew by experience that the dissipation of the New York banking reserve, upon which practically the credit volume of the nation rests, would alarm the nation, intensify the panic, and greatly prolong the period of recuperation. . . . New York bankers have been severely criticised because they did not more fully respond to the demands of country correspondents by shipping currency against balances. To have fully honored the demands that were pouring in from all sections of the country would have dissipated our banking reserve in a fortnight. How could it be replenished? Were the interior bankers sending currency to New York? What would have been the effect upon the country if the New York banking reserve had been entirely depleted? It would have so intensified the panicky feeling that wide-spread commercial disaster would have resulted. . . . The $53,000,000 deficit in our banking reserve occurred in less than ten days after the failure of the Knickerbocker Trust Company, and was caused by the shipment to interior institutions of the larger portion of that amount in that short time.[1] We kept the door of our treasure house wide open, until for the good of the whole country it became necessary to everywhere close it. It never was fully closed; currency shipments continued in a restricted way throughout the panic, and a large number of our banks kept up their counter payments as usual.[2]

A contrast with the action taken by the Bank of England at the same time is most striking, and far from flattering to American bankers. At the time of suspension, gold imports had already been engaged, and there was every indication that they would assume large proportions.

[1] As a matter of fact, the reserve deficit was primarily due to the local situation in New York City On account of the Trust Company situation the clearing-house banks increased their loans, and consequently their deposit liabilities, by $70,000,-000 during the last two weeks of October The reported shipments of currency to the interior not offset by receipt of government money amounted to only $4,000,000, so that most of the net loss of $40,000,000 was unquestionably due to payments in the city itself.—AUTHOR'S NOTE

[2] Commercial and Financial Chronicle, October 10, 1908, Bankers' Convention Section, p. 84

The Treasury was increasing its deposits with the banks, and a considerable addition to the bank-note circulation was also being made. There was therefore a large addition to our currency in sight. On the other hand, the reserve of the Bank of England at the beginning of the panic was only £24,000,000, and it was reduced after two weeks to £17,000,000, largely through withdrawals for export to the United States. There was not, however, the remotest thought in London that the Bank of England might suspend cash payments, though the Governor of the Bank of England might have reasoned with perhaps more justification, after the manner of the president of the New York clearing-house. The actual amount of money held as reserve in the banking department of the Bank of England, and even in the issue department, was much smaller than the reserve of the clearing-house banks, and the means for increasing that reserve were by no means more certain.

We seem to have made a sort of fetich of the legal percentage of reserve, giving it an utterly unreal importance as something to be maintained to the sacrifice of every other consideration. We need an elastic reserve policy far more than an elastic currency. The demand for more notes is simply a demand for a roundabout contrivance for purposes which could be directly attained if we would but use our reserves in time of crisis.

The fact that there are central banks in Europe and a group of reserve-holding banks in New York does not alter in the slightest the nature of the policy to be pursued. The failure to adopt proper methods seems to be due not so much to inability as to a failure to recognize the responsibility of their position by the New York banks which hold bankers' deposits. Local responsibilities are clearly perceived, and properly so, as is indicated by the various money pools organized during the recent panic

to provide money for stock exchange purposes and to assist certain trust companies. Had a similar method been adopted to meet the demands from outside New York City, it is probable that cash payments would have been generally maintained, and the derangement of the domestic exchanges avoided, with all its accompanying loss to the business community. The difficulties of the situation were in one respect distinctly greater than would present themselves in Europe. It is impossible to make use of personal arguments to convince thousands of country bankers of the unwisdom and inadvisability of some of their demands for money during periods of financial strain. A central bank in this country, however, would be confronted with exactly the same difficulty. More and more, as we have seen, central banks rule by persuasion,—a method which is possible because of the concentration of management and responsibility which has resulted from the growth of branch banking.

We already have far more centralization of banking power in New York than is generally realized. Before the crisis of 1907 the six largest New York national banks held net bankers' deposits of $305,000,000 out of a total of $410,000,000 of such deposits held by all the national banks of the city. It is somewhat disconcerting to find that these banks, which held a reserve of $140,000,000 in August, 1907, still held $111,000,000 in December, 1907. There is no indication that these banks made any serious effort to provide their banking correspondents with the funds which they required during the crisis. The responsibilities incurred by a bank which receives bankers' deposits were not realized, nor were those deposits protected by a sufficient reserve. The reserves of the six large banks were no greater in proportion to their credit liabilities than those of the New York national banks whose business is of a purely local character. Insufficient reserves

against bankers' deposits are clearly one source of weakness in our present system. It is because so large a proportion of its deposits are placed in its keeping by other banks that the Bank of England keeps a large reserve. A legislative requirement of a greater reserve would, however, be of doubtful service, because of the tendency to regard a legal reserve as something on no account to be utilized. Voluntary action by the banks looking towards a larger reserve in ordinary times would certainly have much better results. To facilitate this step, banks should be forbidden to pay interest upon bankers' deposits. After the crisis of 1873 a committee of the New York clearing house reported strongly against the payment of interest upon bankers' deposits.[1] It was pointed out that such payments forced the New York banks to lend up to the hilt in July and August, altho contraction in subsequent months was absolutely certain because of crop-moving requirements. Unfortunately, the proposal was too conservative to secure the support of the more "progressive" bankers. Another advantage would be likely to follow from this measure. Outside banks are accustomed to deposit in New York and other cities funds largely in excess of their reserve requirements at times when they are unable to lend them at home at customary rates. These excess deposits are peculiarly unstable, and they tend to an accumulation of funds in our money centers which fosters unwholesome speculation.[2]

In conclusion, the following observations may be made with some confidence. A central bank does not appear

[1] This illuminating report should be better known It will be found in the Commercial and Financial Chronicle, November 15, 1873, and in the Bankers' Magazine, December, 1873.

[2] It is estimated that at the present time (April, 1908) the interior banks have on deposit with the New York banks quite $100,000,000 beyond their reserve requirements Altho it is certain that these funds will be drawn upon as soon as business activity is resumed, the clearing-house banks show a surplus reserve of less than 1 per cent of their credit liabilities

to be either required or well suited to relieve our financial ills. On account of the absence of branch banking it would not be able to handle the government funds in a satisfactory fashion or to provide an elastic note issue. Branch banking is an essential preliminary, if we are to have a central bank of anything like the European type, and there are powerful objections to such a change, the discussion of which does not fall within the scope of this essay.

The causes of financial troubles in the United States are in large measure peculiar to this country. Certain general causes of financial disturbances, such as the highly speculative character of many American economic activities, are beyond the control of the banks, however organized. Our stock exchanges might well adopt the European method of periodical settlement dates. As for the banks, a more definite recognition of the responsibility incurred by those who hold bankers' deposits is needed. They should hold larger reserves in ordinary times, but this will avail little unless it is accompanied with a more intelligent understanding of the policy required in time of crisis. If this is too much to expect, the immediate remedy would seem to be a reduction in the proportion of reserves which may be deposited by outside banks in reserve and central reserve cities. That proportion does not seem excessive in itself, but the repeated failure of our city banks to maintain cash payments in the past has shown that deposited reserves are practically unavailable in an emergency. It has also given rise to a feeling of general distrust in the community, not so much of the solvency of the banks as of the possibility of securing money in time of financial stress. In all countries at such times some depositors withdraw their money, and hoard it from unreasoning fear. In the United States there are also withdrawals by prudent

depositors who wish to be absolutely certain that they shall have money needed in their affairs, and by others who are influenced by the prospects of reaping a profit in a few weeks from the sale of money at a premium. Repeated suspensions have established a tradition which is an ever-present source of weakness, and which can only be broken by the successful endurance of the strain of a crisis by the banks. Some provision for an emergency circulation under conditions which would make resort to it reasonably feasible might possibly prove useful; but, above all, it should be repeated, a more intelligent conception of the purposes of a banking reserve is required.

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